

**Remarks**

Reconsideration is respectfully requested. Claims 1-17 are pending. Claims 12-17 are canceled. No claims are added. Therefore, upon entry of this amendment, claims 1-11 will be pending.

***Priority Claim***

In the Response filed on December 10, 2008, Applicants requested entry of the Preliminary Amendment filed on August 14, 2007, and correction of the priority claim. Specifically, the priority claim was amended to indicate that the present application also “is a continuation in part of and claims priority from PCT Application No. PCT/US02/04468, filed February 15, 2002.” The initial priority claim had noted that the application claimed priority to the PCT application, but had omitted the relationship between the present application and the PCT application. To date, Applicants have not received an updated Filing Receipt with the corrected priority claim. Applicants also note that the PAIR database does not reflect the corrected priority claim. Applicants respectfully request entry of the Preliminary Amendment and correction of the priority claim.

***35 U.S.C. § 103(a)***

Claims 1-9 and 11 are rejected under 35 U.S.C. § 103(a) as being obvious over Stone (U.S. Patent No. 6,432,929). Applicants disagree and request reconsideration.

Independent claims 1 and 8 recite, in part, a method for making a beverage wherein glucosamine (GLCN) is present in the beverage *during heat pasteurization*. (Emphasis added.) In contrast, Stone discloses a method for preparing a beverage comprising glucosamine wherein the glucosamine is added *after* heat pasteurization. Stone’s disclosed method comprises preparing, pasteurizing, and cooling a drink base. (Col. 7, ll. 59-64.) Separately, a cartilage supplement solution is prepared “at temperatures below those used in a heat pasteurization process, preferably but not necessarily, at ambient temperatures or lower.” (Col. 8, ll. 1-6.) The drink base and cartilage solution are then combined “at ambient temperatures or as low as 35°F.” (Col. 8, ll. 6-8.) Stone discloses another embodiment wherein a cartilage supplement is added to the drink base “preferably but not necessarily, at temperatures below those used in a heat pasteurization process.” (Col. 8, ll. 19-21.) Stone also discloses that heat pasteurization parameters range from a low of about 165 °F for 3 minutes

to about 200 °F for less than 40 seconds. (Col. 8, ll. 61-64.)

The Office action states, "Since the reference's teaching is not limited to the preferred embodiments, the claimed beverage and a method of making the same are *prima facie* obvious over Stone." (Office action, paragraph bridging pages 2-3.) This conclusion is incorrect.

Stone does not teach or suggest preparing a drink comprising glucosamine and *subsequently* heat pasteurizing the drink. In fact, Stone teaches away from pasteurizing the drink after addition of the cartilage supplement and states, "[T]he total residence time of the cartilage solution at elevated temperatures is minimal, thereby minimizing any heat inactivation of the cartilage supplement." (Col. 8, ll. 42-45.) Stone further emphasizes this point by stating that the cartilage supplement may be added to the juice base prior to pasteurization when "using pasteurization processes that *do not include heat processing*, such as, but not limited to, filter sterilization or radiation sterilization." (Col. 9, ll. 1-6.)

Attached is a Declaration by Todd Banner Pursuant to 37 C.F.R. § 1.132 ("Declaration"). Dr. Banner conducted research on glucosamine stability in aqueous solution in 2002-2003, while employed by Cargill, Incorporated, the Assignee of the present Application. (Declaration, ¶ 2.) Dr. Banner states that, at the time of the present invention, "those of us with experience with glucosamine believed that addition of glucosamine prior to heat pasteurization would degrade the glucosamine." (Declaration, ¶ 5.) Dr. Banner further states, "The basis for the limitations described by Stone was well known to those of us working in the field of glucosamine." (Declaration, ¶ 7.)

As was known at the time of invention, "glucosamine can undergo Maillard-type chemical degradation in aqueous solutions when heated." (Declaration, ¶ 7.) Attached to the Declaration is Appendix A, which presents results from experiments performed to validate the belief that glucosamine is unstable in aqueous solution when heated for a period of time at high temperatures. The results clearly show that glucosamine stability decreases as temperature increases, and that the percent recovery of glucosamine decreases over time when heated.

These findings support the opinion of Dr. Banner that, "At the time of the present invention, I and others in the field of glucosamine chemistry had concluded that glucosamine was unstable in aqueous solutions and would degrade when heated, such as during heat pasteurization. Accordingly, it is my opinion that a person skilled in the art of glucosamine chemistry and applications at the time of the present invention would not have read Stone and concluded that it was obvious to heat-pasteurize beverages containing glucosamine. Instead, I and others in the field concluded that glucosamine

should not be added to beverages prior to pasteurization due to likely degradation." (Declaration, ¶9.)

Given the opinion of Dr. Banner along with the statements made in Stone regarding the desirability of preparing the cartilage solution at temperatures below those used in heat pasteurization and minimizing the time the cartilage solution is at elevated temperatures, one cannot conclude that it would have been obvious to a person of ordinary skill in the art, upon reading Stone, to prepare a beverage containing glucosamine and then subsequently heat pasteurize the beverage because doing so would degrade the desired glucosamine. Therefore, claims 1 and 8 are not obvious in view of Stone, and Applicants request that the 35 U.S.C. § 103(a) rejection of claims 1 and 8 be withdrawn. Claims 2-7, 9, and 11 depend from claim 1 or claim 8 and are allowable for the reasons set forth in relation to claims 1 and 8.

Claims 10 and 12-17 are rejected under 35 U.S.C. § 103(a) as being obvious over Stone (U.S. Patent No. 6,432,929) in view of Yang et al. (Chemical Agricultural Society, 36(6): 554-564, (1998)) and applicant's admittance on page 10 of the specification. In response to this rejection, claims 12-17 are canceled.

Claim 10 depends from claim 1. Accordingly, claim 10 is allowable for the same reasons as claim 1. Applicants respectfully request withdrawal of the rejection.

If there are any minor issues to be resolved before a Notice of Allowance is granted, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

One World Trade Center, Suite 1600  
121 S.W. Salmon Street  
Portland, Oregon 97204  
Telephone: (503) 595-5300  
Facsimile: (503) 595-5301

By

  
Gillian Gardner  
Registration No. 62,755